

## **I. Amendments to the Claims:**

This listing of claims replaces without prejudice or disclaimer all prior versions, and listings of claims in the application.

### **Listing of Claims:**

Claims 1-33 (Cancelled).

34. (Currently Amended) A method for processing an injection molded thermoplastic preform, comprising the steps of:

injection molding the preform;

receiving the preform in an insert having a surface defining a cavity that is configured to substantially correspond to a length of with an external portion of the preform received within the insert, in a cavity defined in the insert, wherein at least a portion of the surface of the insert that defines the cavity comprises a porous material; and

deforming the received preform by the action of negative pressure applied to the insert by extracting the air present between the surface of the insert and the preform through the porous material such that ambient pressure acting within the internal space of the preform presses an external portion of the preform against the surface of the insert to draw a preform portion into contact therewith and thereby compensate for a defect in the injection molded preform.

35. (Previously Presented) The method according to Claim 34, the step of deforming the received preform compensates for shrink mark defects in the preform.

36. (Previously Presented) The method according to Claim 34, the step of deforming the received preform compensates for warpage defects in the preform.

37. (Currently Amended) The method according to Claim 34, wherein the method further includes the step of sealing the external portion of the preform in cooperation with the insert by means of a seal ~~preform-portion~~ in the insert to prevent the intake of ambient air when negative pressure is applied.

38. (Previously Presented) The method according to Claim 34, wherein the method further includes the step of cooling the preform in said insert.

39. (Previously Presented) The method according to Claim 34, wherein the method further includes the step of applying an input of locally varying pressure conditions along the surface of the insert.

40. (Previously Presented) The method according to Claim 34, further comprising the steps of applying overpressure and negative pressure to the preform through a porous element of the insert.

41. (Previously Presented) The method according to Claim 34, wherein the step of deforming the preform for varying of a circumferential distribution of material in a wall of the

preform causes a remolding of the preform to effect an oval distribution of material in the wall of the preform.

42. (Previously Presented) The method according to Claim 34, further comprising a step of blow molding the preform in a single-stage injection-blow process, and wherein the step of deforming the preform is carried out prior to the blow molding step.

43. (Previously Presented) The method according to Claim 34, further comprising a step of blow molding the preform in a dual-stage injection-blow process, and wherein the step of deforming the preform is carried out prior to blow molding step.

44. (Currently Amended) A device for processing an injection molded thermoplastic preform, comprising:

an insert having a surface defining a cavity that is configured to substantially correspond to the length of ~~for receiving~~ an external portion of the ~~injection-molded~~ preform received therein; and

at least a portion of the surface of the insert ~~that defines the cavity~~ comprising a porous material for deforming the received preform by the action of negative pressure through the insert by extracting the air present between the surface of the insert and the preform applied through the porous material such that ambient pressure acting within the internal space of the preform presses the external portion of the preform against the surface of the insert ~~to draw a preform portion into contact therewith and thereby compensate for a defect in the injection molded preform.~~

45. (Previously Presented) The device according to Claim 44, wherein the cavity defined in the insert is configured to compensate for shrink mark defects in the preform.

46. (Previously Presented) The device according to Claim 44, wherein the cavity defined in the insert is configured to compensate for warpage defects in the preform.

47. (Previously Presented) The device according to Claim 44, wherein the insert further comprising a negative pressure channel for providing the negative pressure to the porous material.

48. (Previously Presented) The device according to Claim 44, wherein the insert includes a seal for sealing the preform portion in the insert cavity.

49. (Previously Presented) The device according to Claim 44, wherein the insert further includes a negative pressure channel extending into the cavity.

50. (Previously Presented) The device according to one Claim 44, wherein the insert is further configured to cool the preform therein.

51. (Previously Presented) The device according to Claim 50, wherein the insert is configured to include a cooling channel therein.

52. (Previously Presented) The device according to Claim 44, wherein the insert is arranged in a frame.

53. (Previously Presented) The device according to Claim 52, wherein the frame is configured to include a cooling channel therein.

54. (Previously Presented) The device according to Claim 44, wherein the insert is disposed in a cooling sleeve.

55. (Previously Presented) The device according to Claim 44, wherein the insert includes a plurality of local porous inserts defining portions of the cavity.

56. (Previously Presented) The device according to Claim 55, wherein the local porous inserts are temporarily and controllably connected by means of control valves to (i) a pressure source, and (ii) one or more negative pressure sources, for applying an input of locally varying pressure conditions along the surface of the insert.

57. (Previously Presented) The device according to Claim 44, wherein the porous material comprises any one of:

- a porous metal;
- a porous metal including aluminum;
- a porous metal including steel;
- a porous metal including a copper alloy; and

a sintered metal.

58. (Previously Presented) The device according to Claim 44, wherein the porous material includes variable pore sizes that are greater than a few  $\mu\text{m}$ .

59. (Previously Presented) The device according to Claim 44, wherein the insert defines the cavity that is configured to vary a circumferential distribution of material in a wall of the preform to effect an oval distribution of material in the wall of the preform.

60. (Currently Amended) A method for processing an injection molded thermoplastic preform, comprising the steps of:

injection molding the preform;

receiving the preform on a mandrel with an internal portion of the preform on a surface of the mandrel, wherein at least a portion of the surface of the mandrel comprises a porous material; and

deforming the received preform by the action of negative pressure applied through the porous material to draw a preform portion into contact therewith ~~and thereby compensate for a defect in the injection molded preform.~~

61. (Previously Presented) The method according to Claim 60, the step of deforming the received preform compensates for shrink mark defects in the preform.

62. (Previously Presented) The method according to Claim 60, the step of deforming the received preform compensates for warpage defects in the preform.

63. (Previously Presented) The method according to Claim 60, further includes the step of sealing the preform portion on the mandrel to prevent the intake of ambient air when negative pressure is applied.

64. (Previously Presented) The method according to Claim 60, wherein the step of deforming the preform for varying of a circumferential distribution of material in a wall of the preform causes a remolding of the preform to effect an oval distribution of material in the wall of the preform.

65. (Currently Amended) A device for processing an injection molded thermoplastic preform, comprising:

a mandrel having a surface for receiving an internal portion of the preform; and

at least a portion of the surface of the mandrel comprising a porous material configured to deform the received preform by negative pressure applied through the porous material to draw a preform portion into contact with said surface ~~and thereby compensate for a defect in the injection molded preform; and~~

the mandrel includes a seal for sealing the preform portion therein to prevent the intake of ambient air when negative pressure is applied.

Claim 66 (Cancelled).

67. (Previously Presented) The device according to Claim 66, wherein the seal is configured for a round end of the mandrel for a partial remolding of the preform.

68. (Previously Presented) The device according to Claim 65, wherein the mandrel comprises at least one membrane that defines a distributor chamber to remold the preform.

69. (Previously Presented) The device according to Claim 65, wherein the porous material comprises any one of:

- a porous metal;
- a porous metal including aluminum;
- a porous metal including steel;
- a porous metal including a copper alloy; and
- a sintered metal.

70. (Currently Amended) An injection molding machine including the device in accordance with any one of Claims 44 to 59, ~~or 65 to 69~~ 65 or 67 to 69.

71. (New) The method according to Claim 34, further comprising the step of effecting a pressure-supported mobility of the preform relative to the insert by means of a negative pressure channel in the insert extending into the cavity.



72. (New) The method according to Claim 34, further comprising the step of maintaining direct contact between the external portion of the preform and the surface of the insert throughout an entire cooling process for cooling the preform.

73. (New) The method according to Claim 34, further comprising the step of deforming the received preform by the action of overpressure by means of a pressure source that is connected to the insert.

74. (New) The method according to Claim 34, wherein the application of negative pressure to the preform takes place through local porous inserts.

75. (New) The method according to Claim 34, further comprising the step of applying an input of locally varying pressure conditions along the surface of the cavity by means of local porous inserts that are temporarily and controllably connected by means of control valves to a pressure source and to one or more negative pressure sources.

76. (New) The method according to Claim 34, further comprising the step of inducing a flow of air through the cavity in the direction of a negative pressure channel by means of a pressurizing medium connection to the insert, in order to facilitate the introduction of the preform into the cavity.